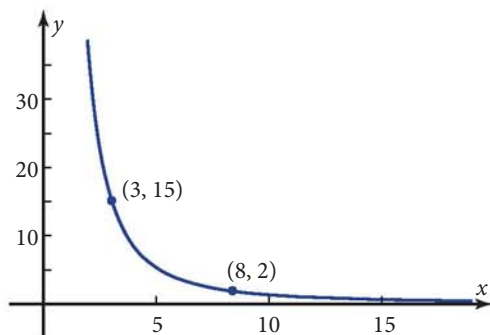


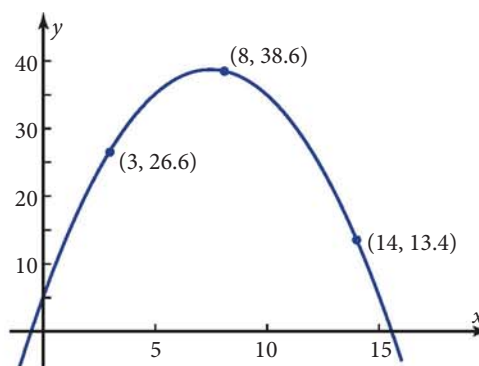
EXPLORATION, continued

7. What graphical evidence do you have that this function is a power function, not an exponential function? Find its particular equation.



8. Check your answer to Problem 7 graphically. Does your graph agree with the given one?
9. Is the graph in Problem 7 concave up, concave down, or neither?

10. Identify what kind of function is graphed, and find its particular equation.



11. Check your answer to Problem 10 graphically. Does your graph agree with the given one?
12. Is the graph in Problem 10 concave up, concave down, or neither?
13. What did you learn as a result of doing this exploration that you did not know before?

EXAMPLE 1 ➤ For the function graphed in Figure 2-2e,

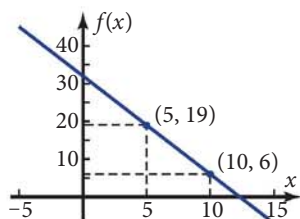


Figure 2-2e

SOLUTION

- Identify the kind of function it is.
 - On what interval or intervals is the function increasing or decreasing? Which way is the graph concave, up or down?
 - From your experience, describe something in the real world that a function with this shape graph could model.
 - Find the particular equation of the function, given that points (5, 19) and (10, 6) are on the graph.
 - Confirm by plotting that your equation gives the graph in Figure 2-2e.
- Because the graph is a straight line, the function is linear.
 - The function is decreasing over its entire domain, and the graph is not concave in *either* direction.
 - The function could model anything that decreases at a constant rate. The Quadrant I part of the function could model the number of pages of history text you have left to read as a function of the number of minutes you have been reading.
 - $f(x) = ax + b$

Write the general equation. Use $f(x)$ as shown on the graph, and use a for the slope.